[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0198; Project Identifier MCAI-2020-00950-E]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce Deutschland Ltd & Co KG (Type Certificate previously held by Rolls-Royce plc) Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede airworthiness directive (AD) 2020-13-07, which applies to all Rolls-Royce Deutschland Ltd & Co KG (RRD) Trent 1000-D2, Trent 1000-J2, and Trent 1000-K2 model turbofan engines with a certain part-numbered fuel pump installed. AD 2020-13-07 requires removal and replacement of the fuel pump with a part eligible for installation. Since the FAA issued AD 2020-13-07, the manufacturer determined that an additional part-numbered fuel pump is subject to the same unsafe condition identified in AD 2020-13-07. This proposed AD would add an additional part-numbered fuel pump and additional Trent 1000 model turbofan engines to the applicability. This proposed AD would require new and reduced life limits, depending on the engine model, for affected fuel pumps. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to https://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: (202) 493-2251.

• Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12 140, 1200 New Jersey Avenue SE, Washington, DC 20590.

• Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Rolls-Royce plc, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; phone: +44 (0)1332 242424; website: https://www.rolls-royce.com/contact-us.aspx. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0198; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Kevin M. Clark, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7088; fax: (781) 238-7199; email: kevin.m.clark@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2021-0198; Project Identifier MCAI-2020-00950-E" at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to https://www.regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Kevin M. Clark, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA issued AD 2020-13-07, Amendment 39-21152 (85 FR 38312, June 26, 2020), (AD 2020-13-07), for all RRD Trent 1000-D2, Trent 1000-J2, and Trent 1000-K2 model turbofan engines with fuel pump, part number G5030FPU01, installed. AD 2020-13-07 was prompted by the manufacturer's investigation into an unexpected reduction in fuel pump performance in certain high life fuel pumps. AD 2020-13-07 requires removal and replacement of the affected fuel pump with a part eligible for installation. The FAA issued AD 2020-13-07 to reduce the risk of reduced thrust during engine operation.

Actions Since AD 2020-13-07 Was Issued

Since the FAA issued AD 2020-13-07, The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European

Community, has issued EASA AD 2021-0006, dated January 7, 2021 (referred to after this as "the MCAI"), to address the unsafe condition on these products. The MCAI states:

> An unexpected reduction in fuel pump performance has been seen during testing of high life units. Strip examination of these fuel pumps has identified that life related wear-out of the internal components is causing deterioration in pump efficiency. The effect of the loss of fuel pump efficiency is more pronounced on higher rated engines.
>
> This condition, if not corrected, could lead to reduced engine thrust, possibly resulting in reduced control of the aeroplane.
>
> To address this potential unsafe condition, Rolls-Royce published NMSB 73-AK581 (original issue) to provide instructions for replacement of the affected parts before exceeding reduced life limits. Consequently, EASA issued AD 2020-0124 to require the removal from service of the affected parts.
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> After that [EASA] AD was issued, Rolls-Royce issued NMSB 73-AK581 Revision 1, introducing an additional fuel pump, P/N TPS1000-05, as well as new and reduced life limits for the affected parts, depending on engine model (rating). Consequently, EASA issued AD 2020-0154, retaining the requirements of EASA AD 2020-0124, which was superseded, expanding the Applicability to include additional engine models (ratings) and requiring implementation of the new and reduced life limits.
>
> Since that [EASA] AD was issued, Rolls-Royce issued the NMSB, as defined in this [EASA] AD, introducing new and reduced life limits for the affected parts, depending on engine model (rating).
>
> For the reason described above, this [EASA] AD retains the requirements of EASA AD 2020-0154, which is superseded, and requires implementation of the new and reduced life limits, as applicable.

You may obtain further information by examining the MCAI in the AD docket on https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0198.

FAA's Determination

This product has been approved by EASA and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified us of the unsafe condition described in the MCAI and service information. The FAA is issuing this NPRM because the Agency evaluated all the relevant information provided by EASA and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed Rolls-Royce (RR) Alert Non-Modification Service Bulletin TRENT 1000-73-AK581, Revision 2, dated December 2, 2020 (RR Alert NMSB). The RR Alert NMSB introduces a reduced life limit for affected fuel pumps installed on certain RRD Trent 1000 model turbofan engines. The RR Alert NMSB also includes additional RRD Trent 1000 turbofan engine models that require implementation of the reduced life limits for affected fuel pumps. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Proposed AD Requirements in this NPRM

This proposed AD would retain all the requirements of AD 2020-13-07. This proposed AD would add an additional part-number fuel pump and additional RRD Trent 1000 model turbofan engines on which this fuel pump is installed to the applicability. This proposed AD would require new and reduced life limits for certain part-numbered fuel pumps, depending on the engine model the fuel pump is installed on.

Differences Between this Proposed AD and the MCAI or the Service Information

EASA AD 2021-0006 identifies RRD Trent 1000-E and Trent 1000-E2 model turbofan engines in the Applicability section. This AD does not include RRD Trent 1000-E and Trent 1000-E2 model turbofan engines in the Applicability. These engine models have never been produced and RR Alert NMSB TRENT 1000 73-AK581, Revision 2,

dated December 2, 2020, did not publish life limits for affected fuel pumps installed on these engine models.

Interim Action

The FAA considers that this proposed AD would be an interim action. If final action is later identified, the FAA might consider further rulemaking.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 28 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Replace fuel pump	3 work-hours x $85 per hour = $255	$393,552	$393,807	$11,026,596

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2020-13-07, Amendment 39-21152 (85 FR 38312, June 26, 2020); and

b. Adding the following new airworthiness directive:

Rolls-Royce Deutschland Ltd & Co KG (Type Certificate previously held by Rolls-Royce plc): Docket No. FAA-2021-0198; Project Identifier MCAI-2020-00950-E.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2020-13-07, Amendment 39-21152 (85 FR 38312, June 26, 2020).

(c) Applicability

This AD applies to Rolls-Royce Deutschland Ltd & Co KG (RRD) (Type Certificate previously held by Rolls-Royce plc) Trent 1000-A, Trent 1000-A2, Trent 1000-AE, Trent 1000-AE2, Trent 1000-C, Trent 1000-C2, Trent 1000-CE, Trent 1000-CE2, Trent 1000-D, Trent 1000-D2, Trent 1000-G, Trent 1000-G2, Trent 1000-H, Trent 1000-H2, Trent 1000-J2, Trent 1000-K2, and Trent 1000-L2 model turbofan engines with a fuel pump, part number (P/N) G5030FPU01 or P/N TPS1000-05, installed.

(d) Subject

Joint Aircraft System Component (JASC) Code 7314, Engine Fuel Pump.

(e) Unsafe Condition

This AD was prompted by the manufacturer's investigation into an unexpected reduction in fuel pump performance in certain high life fuel pumps and life-related wear-out of the internal components, which causes deterioration in fuel pump efficiency. The FAA is issuing this AD to prevent failure of the fuel pump, loss of engine thrust control and reduced control of the airplane. The unsafe condition, if not addressed, could result in failure of the fuel pump, loss of thrust control, and loss of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Within the compliance time specified in Planning Information, paragraph 1.D.2, of Rolls-Royce (RR) Alert Non-Modification Service Bulletin TRENT 1000 73-AK581, Revision 2, dated December 2, 2020 (the RR Alert NMSB), or within 30 days after the effective date of this AD, whichever occurs later, remove the fuel pump, P/N G5030FPU01 or P/N TPS1000-05, and replace it with a part eligible for installation.

(h) Definition

For the purpose of this AD, a ‘‘part eligible for installation’’ is a fuel pump with a P/N other than G5030FPU01 or TPS1000-05 or a fuel pump that has not exceeded the compliance time specified in Planning Information, paragraph 1.D.2, of the RR Alert NMSB.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Kevin M. Clark, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7088; fax: (781) 238-7199; email: kevin.m.clark@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2021-0006, dated January 7, 2021, for more information. You may examine the EASA AD in the AD docket at https://www.regulations.gov by searching for and locating it in Docket No. FAA-2021-0198.

(3) For service information identified in this AD, contact Rolls-Royce plc, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; phone: +44 (0)1332 242424; website: https://www.rolls-royce.com/contact-us.aspx. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759.

Issued on March 24, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.
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